



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

m-f

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/053,558	01/24/2002	Simon G. Ingram	12086	3295
23599	7590	10/02/2006	EXAMINER	
MILLEN, WHITE, ZELANO & BRANIGAN, P.C.			SELBY, GEVELL V	
2200 CLARENDON BLVD.			ART UNIT	PAPER NUMBER
SUITE 1400				2622
ARLINGTON, VA 22201				

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/053,558	INGRAM, SIMON G.	
	Examiner Gevell Selby	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 July 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-10 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1,2 and 4-8 is/are allowed.
- 6) Claim(s) 3,9 and 10 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/10/06 have been fully considered but they are not persuasive. The applicant's submit the prior art does not disclose the following limitation of the claimed invention:

operating a first sensor of a camera to integrate a first charge over a first time interval, as stated in claim 3. The Examiner respectfully disagrees.

Examiner's Reply:

Re claim 3) The Glenn reference discloses a camera with a shutter (660) that has an open sector (661) which opposes a dark opaque sector (662), as well as opposing mirror or reflection sectors (663 and 664: see column 4, lines 37-41). The open section exposes the Y sensor (130, second sensor) and two mirror sections expose the color sensor (130, first sensor: see column 4, lines 43-44). The claim does not define the start and stop times of intervals, only that a certain operation is including in the interval; therefore, the interval can be defined as any time period including the specified operation. The examiner reads the first time interval of the Glenn reference as starting when the first reflective sector moves into the optical path to expose the first sensor, continuing when the open sector moves into the optical path, and continuing until the second reflective sector has rotated in and then out of the optical path, since the first image sensor is integrated over this time interval as interpreted from the configuration of the shutter in figure 6 and the reference above.

The applicant states that this interpretation of the first time interval is erroneous because there is a period where no light is impinging on the first sensor and therefore one of ordinary

skill in the art would not interpret that the first sensor is operated “to integrate a charge”. However, the specification supports this interpretation of a first time interval on page 36, lines 18-28 and figure 26. The first time interval is from region I-X and XIV, wherein the time interval includes regions III and VII where the first image sensor 14 is in darkness inside of the camera body, thus teaching that the first sensor is operated “to integrate a charge” when no light is impinging on it for part of the time interval.

The examiner reads the second time interval as the time the open sector exposes the Y sensor, which is included entirely in the first time interval, since the second sensor is integrated over this time interval as interpreted from the configuration of the shutter in figure 6 and the reference above. Therefore, the two intervals overlap. The Examiner reads the third time interval as the time the opaque sector is in the optical path and the vertical transfer to the storage registers occurs for both sensors (see column 4, lines 41-43). The third time interval does not overlap the first or second intervals, since only readout occurs. Therefore, the Glenn reference discloses all the limitations of claim 3.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 3, 9, and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Glen, US 6,891,568.

In regard to claim 3, Glenn, US 6,891,568, discloses a method comprising steps of (1) operating a first sensor (130) of a camera to integrate a first charge over a first time interval (see column 4, lines 35-45: It is inherent the first sensor integrates the light received over a time interval that includes rotating the reflective sections (663 and 664) into the light path in order to be able to scan the signals), (2) operating a second sensor (120) of the camera to integrate a second charge over a second time interval and (see column 4, lines 35-45: It is inherent the second sensor integrates the light received over a time interval the includes rotating the transmission section (661) in order to be able to scan the signals) (3) scanning the first and second sensors to readout the respective fist and second charges during a third time interval (see column 4, lines 40-42), wherein:

the step of operating the first sensor includes integrating the first charge in the first sensor while a first image light reflects from a first reflection sector of a rotatable structure onto the first sensor (see column 4, lines 43-44);

the step of operating the second sensor includes integrating the first charge in the second sensor while a second image light passes through a first transmission sector of the rotatable structure onto the second sensor(see column 4, lines 43-44);

the step of scanning includes transferring the integrated first and second charges from the respective first and second sensors while a first opaque sector on the rotatable structure prevents the first and second image light from impinging on at least one of the first and second sensors (see column 4, lines 40-43);

the first time interval overlaps the second time interval (see column 4, lines 37-43: the second time interval occurs in the middle of the first time interval);
the third time interval includes no overlapping time with the first time interval (see column 4, lines 37-45: the third time period starts after both sensors have finished integrating to transfer the data); and
the third time interval includes no overlapping time with the second time interval (see column 4, lines 37-45: the third time period starts after both sensors have finished integrating to transfer the data).

In regard to claim 9, Glenn, US 6,891,568, discloses a method comprising:

operating a first sensor of a camera over a first time interval to integrate a first charge in the first sensor while a first image light reflects from a first reflection sector of a rotatable structure onto the first sensor (see column 4, lines 35-45: It is inherent the first sensor integrates the light received over a time interval that includes rotating the reflective section (664) into the light path in order to be able to scan the signals);

operating a second sensor of the camera over a second time interval to integrate a second charge in the second sensor while a second image light passes through a first transmission sector of the rotatable structure onto the second sensor; and

scanning the first and second sensors during a third time interval to transfer the respective integrated first and integrated second charges from the respective first and second sensors while a first opaque sector of the rotatable

structure prevents the first and second image light from impinging on at least one of the first and second sensors (see column 4, lines 40-43),

wherein the first time interval overlaps a fractional part of the second time interval (see figure 6 and column 4, lines 45-46: the first time interval overlaps while the shutter is turned so the parts of both sections 661 and 664 are in the optical path and light passes to both sensors), and

wherein the third time interval includes no overlapping time with the first time interval and the third time interval includes no overlapping time with the second time interval (see column 4, lines 40-42: the third time interval occurs after the first two have completed and no light shines on either sensor).

In regard to claim 10, Glenn, US 6,891,568, discloses a method comprising:

operating a first sensor of a camera over a first time interval to integrate a first charge in the first sensor while a first image light reflects from a first reflection sector of a rotatable structure onto the first sensor (see column 4, lines 35-45: It is inherent the first sensor integrates the light received over a time interval that includes rotating the reflective section (664) into the light path in order to be able to scan the signals);

operating a second sensor of the camera over a second time interval to integrate a second charge in the second sensor while a second image light passes through a first transmission sector of the rotatable structure onto the second sensor (see column 4, lines 35-45: It is inherent the second sensor integrates the light

received over a time interval the includes rotating the transmission section (661)

in order to be able to scan the signals); and

scanning the first and second sensors during a third time interval to transfer the respective integrated first and integrated second charges from the respective first and second sensors while a first opaque sector of the rotatable structure prevents the first and second image light from impinging on at least one of the first and second sensors (see column 4, lines 40-43),

wherein the second time interval overlaps one and only one of a beginning and an end of the first time interval (see figure 6 and column 4, lines 45-46: the first time interval overlaps while the shutter is turned so the parts of both sections 661 and 664 are in the optical path and light passes to both sensors), and

wherein the third time interval includes no overlapping time with the first time interval and the third time interval includes no overlapping time with the second time interval (see column 4, lines 40-42: the third time interval occurs after the first two have completed and no light shines on either sensor).

Allowable Subject Matter

3. Claims 1, 2, and 4-8 are allowed.
4. The following is a statement of reasons for the indication of allowable subject matter:
Claims 1, 2, and 4-8, are allowable for the reasons stated in the previous office action.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gevell Selby whose telephone number is 571-272-7369. The examiner can normally be reached on 8:00 A.M. - 5:30 PM (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on 571-272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

gvs



VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600